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80 Line Brush "Duco"
Trade Sales

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Philadelphia Laboratory
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80 LINE BRUSH "DUCO"
FLEXIBILITY CHECK

Introduction:

(1) In comparing the new 615 Line enamels developed for Export Sales (Release Letter #1229) with Brush "Duco" to check for drying, hardness, gloss and build, there appeared some evidence of poor flexibility of the current Brush "Duco" particularly with respect to white and light tints. This evidence was based on results obtained from 1 coat brushouts over unsanded steel.

(2) In order to definitely establish as to whether current "Duco" production did possess poor flexibility, a new series of tests were started which included various formula modifications and inter-plant production. These products were tested over sanded and unsanded bare steel and over sanded and unsanded undercoated wooden panels.

Summary:

(A) This recheck has definitely illustrated that the poor showing of Brush "Duco" in the initial tests was not a question of poor flexibility, but poor adhesion over improperly prepared substrates. This is based on the significant differences in adhesion between sanded and unsanded steel and the fact that when applied over undercoated wooden surfaces, the adhesion is perfect.

(B) There appeared no significant differences with respect to adhesion or flexibility among the various formula modifications or the inter-plant production.

(C) There is still an advantage in adhesion in favor of the cheaper line of enamels, which it is felt is brought about by the fact that these products are considerably lower in solids and viscosity than 80 Line "Duco" thereby resulting in thinner films which account for improved adhesion.

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Details:

(A) Included in the above tests were the following "Duco" formula modifications and inter-plant production samples.

1. Soya Oil vs. linseed
2. Rutile vs. Anatase Titanium pigments
3. Glycerine vs. P. E.
4. Old P.E. vs. current P.E.
5. TiCal vs. Surfex (Low hiding formulas).
6. Neofac #7 vs. H-260 and VM-7790.
7. Production samples from Chicago, Ft. Madison and South San Francisco. *and Philadelphia.*
8. Tabulated data of the above tests is recorded in Book #5157.

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